BY ORDER OF THE CHIEF,
NATIONAL GUARD BUREAU

MANPOWER STANDARD 23E2SO

1 DECEMBER 2004

Manpower Standard

MISSION SYSTEMS EC-130E (RIVET RIDER)

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Air National Guard Manpower Standard (ANGMS) quantifies the manpower required to accomplish the tasks described in the process oriented description (POD) for varying levels of workload in the Mission Systems EC-130E (Rivet Rider). This ANGMS applies to the Mission Systems EC-130E, Rivet Rider mission only, at the 193rd SOW, PA. This standard applies to peacetime operations only. The Air National Guard (ANG) is the authority for the approval and publication of ANG Manpower Standards. Air Force (AF) and ANG directives contain policy and procedural guidance for the operation of the Rivet Rider function. This standard was developed in accordance with AF Instruction (AFI) 38-201, *Determining Manpower Requirements,* and AF Manual (AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP) - Processes*, and AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*. Send comments and suggested improvements on AF IMT 847, *Recommendation for Change of Publication*, through channels, to ANG, Management Engineering Branch (ANG/XPME/Operating Location TN [OLTN]), 106 Briscoe Drive, McGhee Tyson ANG Base, TN 37777-6283.

1. STANDARD DATA.

1.1. Approval Date: 1 December 2004.

1.2. Man-hour Data Source: Operational Audit method (historical record and technical estimate techniques).

1.3. Standard Man-hour Equation: $Y = 411.9 + 6.100(X1) + 35.81(X2)$.

1.4. Workload Factor.

1.4.1. Titles:

1.4.1.1. X1 = A Programmed Flying Hour.

1.4.1.2. X2 = A Primary Aircraft Vehicle Authorized.

1.4.2. Definition:

1.4.2.1. X1 = Monthly number of flying hours programmed.

1.4.2.2. X2 = Average monthly primary aircraft authorized.

1.4.3. Source: USAF Program Document (PD), Volume II maintained by ANG/XPPI.

1.4.4. Points of Contact.

1.4.4.1. Functional: Lt Col Robert Hoback, ANG/LGY

1.4.4.2. Manpower: Mr. Steve Griffith, XPME, Engineering Branch

2. APPLICATION INSTRUCTIONS.

2.1. Step 1. Man-hour Equation. Apply the man-hour equation in Paragraph 1.3., to determine required man-hours.

2.2. Step 2. Man-hour Availability Factor (MAF). Divide the resulting man-hours by the appropriate MAF times the overload factor.

2.3. Step 3. Upper and Lower Extrapolation Limits:

2.3.1. Y_U = 1853.85.

2.3.2. Y_L = 1112.32.

2.4. Step 4. Air Force Specialty Codes (AFSC) Requirement. Use the Manpower Table Attachment 3 to determine required AFSCs.

3. STATEMENT OF CONDITIONS. The conditions listed below had no affect on the development of this standard: minimum response rates, minimum manpower levels, standardized crew complements, safety considerations, aircraft turn-around time, length of waiting periods, levels of backlog and hours of operation.

DANIEL JAMES III, Lieutenant General, USAF
Director, Air National Guard

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 38-201, *Determining Manpower Requirements*

AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP)-Processes*

AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*

Abbreviations and Acronyms

AF - Air Force

AFMS - Air Force Manpower Standard

AFSC - Air Force Specialty Codes

AGE - Aerospace Ground Equipment

ANG - Air National Guard

ANGMS - Air National Guard Manpower Standard

CFETP - Career Field Education and Training Plan

FMB - Financial Management Board

HF - High Frequency

KW - Kilowatt

MAF - Man-hour Availability Factor

MSDS - Material Safety Data Sheets

MEP - Management Engineering Program

MF - Medium Frequency

PD - Program Document

PMEL - Precision Measurement Laboratory

POD - Process Oriented Description

PQDR - Product Quality Deficiency Report

TCTO - Time Compliance Technical Order

UHF - Ultra High Frequency

UTA - Unit Training Assembly

VHF - Very High Frequency

WLF - Work Load Factors

Terms

Air National Guard Manpower Standard (ANGMS). A numbered, specialized publication that quantifies manpower requirements for a work center. Also includes approved variances. See AFI 38-201.

Man-hour. A unit of measuring work. It is equivalent to one person working at a normal pace for 60 minutes, two people working at a normal pace for 30 minutes, or a similar combination of people working at a normal pace for a period to time equal to 60 minutes.

Manpower Standard. The basic tool used to determine the minimum level of manpower required to support a function. It is a quantitative expression that represents a work center's man-hour requirements in response to varying levels of workload.

Process Oriented Description. A format that shows work center responsibilities structured for easy measurement of work categories, tasks and subtasks.

Attachment 2

PROCESS ORIENTED DESCRIPTION
MISSION SYSTEMS

Table A2.1. Listing of Functional Process.

1.	EQUIPMENT MAINTENANCE AND INSPECTION. Maintains special mission system. Inspects, troubleshoots, removes, replaces, and repairs equipment.
1.1.	MAINTAINS AUDIO SYSTEM.
1.2.	MAINTAINS PRECISION MEASUREMENT LABORATORY (PMEL) TEST EQUIPMENT.
1.3.	MAINTAINS RECEIVER.
1.4.	MAINTAINS WORLD WIDE COLOR TV.
1.5.	MAINTAINS MF TRANSMITTER
1.6.	MAINTAINS HF TRANSMITTER.
1.7.	MAINTAINS TV-80.
1.8.	MAINTAINS VHF-LOW TRANSMITTER.
1.9.	MAINTAINS VHF-HIGH TRANSMITTER.
1.10.	MAINTAINS UHF TRANSMITTER.
1.11.	MAINTAINS HORIZONTAL TRAILING WIRE ANTENNA.
1.12.	MAINTAINS VERTICAL TRAILING WIRE ANTENNA.
1.13.	MAINTAINS NARROW BAND ANTENNA.
1.14.	MAINTAINS WIDE BAND ANTENNA.
1.15.	MAINTAINS 10KW WING POD ASSEMBLY.
1.16.	INSPECTIONS. Performs inspection and/or work required in support of inspection being conducted.
2.	TRAINING. Performs on-the-job training, documents training in employee's training file, transcribes Training Career Field Education and Training Plan (CFETP), and identifies training requirement.

2.1.	TRANSCRIBES CFETP AND IDENTIFIES TRAINING REQUIREMENT.
2.2.	DOCUMENTS TRAINING.
2.3.	PERFORMS ON-THE-JOB TRAINING.
3.	RESEARCH AND DEVELOPMENT. Researches part and tool to service mission system, builds mock up and tests cable/adapter, writes technical data, develops procedure, and researches test equipment.
4.	TIME COMPLIANCE TECHNICAL ORDER (TCTO). Performs maintenance required on/off the aircraft in accordance with applicable TCTO and completes documentation.
5.	SPECIAL PLANNING OR SCHEDULING. Performs planning or scheduling associated with preparation for unit training assembly (UTA), annual tour, and mobility/deployment participation.
5.1.	PREPARES FOR UTA.
5.2.	PREPARES FOR ANNUAL TOUR.
5.3.	PREPARES FOR MOBILIZATION/DEPLOYMENT PARTICIPATION.
6.	TRAVEL. Travel as it relates to the EC-130E mission.
7.	MAINTENANCE AUTOMATED SYSTEM. Makes input to Core Automated Maintenance System.
8.	HAZARDOUS WASTE PROGRAM MANAGEMENT.
8.1.	PROCESSES HAZARDOUS WASTE. Identifies, labels, contains, and disposes of hazardous waste.
8.2.	MAINTAINS PROTECTIVE EQUIPMENT. Inspects and maintains protective equipment.
8.3.	PARTICIPATES IN POLLUTION, PREVENTION AND REDUCTION PROGRAM. Attends training class in chemical reduction and management. Monitors level of usage.
9.	FOREIGN OBJECT DAMAGE WALK/INSPECTION. Performs walk around the maintenance complex and runway for debris.
10.	PMEL COORDINATOR. Serves as base coordination point for Wing test equipment. Maintains a list of equipment requiring PMEL calibration or testing; schedules and coordinates repair/calibration; picks up and delivers equipment from user; delivers and picks up equipment serviced by Andrews

	AFB PMEL Lab; packages and prepares equipment for shipment to TSC Warren, MI, and Wyle PMEL labs; serves as pick up and delivery point for Letter Kenny Lab.
10.1.	SCHEDULES, COORDINATES, RECEIVES, PICKS UP, AND DELIVERS WING PMEL EQUIPMENT.
10.2.	CONDUCTS ON-SITE CALIBRATION WITH LETTER KENNY LAB.
11.	BENCH STOCK.
11.1.	MAINTAINS BENCH STOCK. Determines requirement, obtains part from Supply, stores in bin upon receipt, and maintains required documentation. Initiates/implements product quality deficiency report (PQDR) for item not meeting government specification.
11.2.	PERFORMS ANNUAL BENCH STOCK REVIEW.
12.	TECHNICAL DATA SUBACCOUNT MAINTENANCE. Receives and posts technical data, change, and supplement to technical order file. Maintains and inventories file for serviceability. Recommends and initiates technical order improvement report.
13.	AIRCREW DEBRIEFING. Attends aircrew debriefing. Completes appropriate documentation.
14.	MATERIEL SAFETY DATA SHEETS (MSDS). Updates MSDS file to maintain serviceability.
15.	NON-POWERED AEROSPACE GROUND EQUIPMENT (AGE)/SHOP AND INDUSTRIAL EQUIPMENT. Inspects and repairs non-powered AGE and shop industrial equipment.
16.	INDIRECT. Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are: Administers Civilian, Officer, and Enlisted Personnel; Directs Work Center Activity; Provides Administrative Support; Prepares for and Conducts/Attends Meeting; Administers Training; Manages Supplies; Maintains Equipment; and Performs Cleanup.

Attachment 3

MANPOWER TABLE

Table A3.1. Standard Manpower Table.

WORK CENTER/FAC Mission Systems/FAC 23E2SO			APPLICABILITY MAN-HOUR RANGE 1112.32 - 1853.85								
Air Force Specialty Title	**AFSC**	**Grade**	**Manpower Requirement**								
Avionics Systems	2A000	CIV	1	1	1	1	1	1			
Comm and Nav Systems	2A1X3	CIV	6	7	8	9	1	11			
Total			7	8	9	10	11	12			

NOTE. AFSCs may be adjusted at the discretion of the Commander.